



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,204	10/29/2003	Ying Zhou	ITL.1024US (P16711)	7312
21906	7590	10/05/2004	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			ESTRADA, MICHELLE	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/696,204	ZHOU ET AL.	
	Examiner Michelle Estrada	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 29 October 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-4,11-13,19,21 and 26 is/are rejected.

7)  Claim(s) 5-10,14-18,20,22-25 and 27-30 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/5/04.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 11-13, 19, 21 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Yao (6,679,996).

With respect to claim 1, Yao discloses soaking a substrate (1) having a dielectric (2) deposited thereon in a salt solution (Col. 7, lines 12-25); and depositing an oxide (3) on said dielectric.

With respect to claim 2, Yao discloses wherein depositing an oxide on said dielectric includes depositing aluminum oxide on said dielectric (Col. 9, lines 17-32), the Examiner clarifies that Yao discloses using a fluoride ion capturing agent added to the aqueous solution to deposit the layer of a corresponding metal oxide or a solid solution thereof, one of these ion capturing agent can be aluminum chloride, therefore aluminum oxide will be formed on the dielectric layer since aluminum oxide is the corresponding metal oxide of aluminum chloride (Col. 9, lines 17-33).

With respect to claim 3, Yao discloses wherein soaking said substrate in said salt solution includes soaking said substrate in a salt solution comprising an aluminum salt (Col. 9, lines 29-32 and 58-61).

With respect to claim 4, Yao discloses wherein soaking said substrate in said salt solution comprising said aluminum salt includes soaking said substrate in a aqueous solution comprising the capturing agent, therefore the salt solution comprises aluminum chloride dissolved in water (Col. 7, lines 15-25).

With respect to claim 11, Yao discloses preparing a salt solution (Col. 7, lines 23-30); exposing a dielectric (2) deposited on a substrate to said salt solution; and causing an oxide to deposit on said dielectric (Col. 7, lines 12-20).

With respect to claim 12, Yao discloses wherein preparing said salt solution includes preparing an aluminum salt solution (Col. 9, lines 29-31).

With respect to claim 13, Yao discloses wherein preparing said aluminum salt solution includes preparing an aluminum chloride solution (Col. 9, lines 29-31).

With respect to claim 19, Yao discloses removing said substrate from said salt solution and rinsing (Col. 11, lines 1-8).

With respect to claim 21, Yao discloses depositing a dielectric (2) on a substrate (1); and causing an oxide (3) to deposit on said dielectric by immersing said substrate in a salt solution (Col. 7, lines 12-30).

With respect to claim 26, Yao discloses wherein depositing an oxide on said dielectric includes depositing aluminum oxide on said dielectric by immersing said substrate in an aluminum salt solution (Col. 9, lines 17-32), the Examiner clarifies that

Yao discloses using a fluoride ion capturing agent added to the aqueous solution to deposit the layer of a corresponding metal oxide or a solid solution thereof, one of these ion capturing agent can be aluminum chloride, therefore aluminum oxide will be formed on the dielectric layer since aluminum oxide is the corresponding metal oxide of aluminum chloride (Col. 9, lines 17-33).

***Allowable Subject Matter***

Claims 5-10, 14-18, 20, 22-25 and 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Estrada whose telephone number is 571-272-1858. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.



Michelle Estrada  
Examiner  
Art Unit 2823

ME  
September 28, 2004